AT&T Federal Computer Equipment Market Study

Submitted to
AT&T

Prepared by

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Attachment 1a: Matrix of Information by Agency
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Attachment 2: Unit Form
Attachment 3: Agency
Attachment 4: Agency Summary Form

I

Introduction

I

Introduction

In February 1989, AT&T's Data Systems Group contacted INPUT, Inc. about its federal market research needs. Over the course of subsequent months, AT&T's requirements were refined. INPUT presented several proposals for custom research support, which assisted AT&T in clarifying its requirements. An initial contract was awarded in July, with work beginning immediately thereafter.

AT&T had ample global data on the federal market, some of it generated internally and some of it generated by consultants. However, AT&T required more agency-specific data, for practically all the agencies in the government. It was decided that a multiphase approach would best suit AT&T's needs.

Specifically, AT&T required information on an agency-by-agency basis, for the product lines and functional considerations, in accordance with the matrix in Attachment 1. While all of this data is not available, AT&T wanted to obtain as much information as possible, allocated along the categories listed in the matrix.

The study has two purposes:

- It provides detailed information on individual agency prospects, which can be used by AT&T sales management in deciding on resource allocation.
- It provides sufficient information to assist AT&T planners in making tactical decisions on products and services for the federal market.

II

Process

II

Process

In performing the project, INPUT collected data first by department or independent agency, and second by subordinate agency. Each initiative or other source of data was initially identified on a unit form (Attachment 2). This form roughly corresponded with the information requirements on AT&T's product-functional matrix. While this form was not always appropriate, it did serve as a good tool for summarizing the information contained in the initiative.

Next, the unit forms were summarized on the preliminary summary form (Attachment 3). This provided spending estimates for both the two-year and five-year time frames, based on the information developed on the unit forms. Some additional information was also provided on these forms, relating to the type of procurement.

INPUT used a variety of sources in identifying these initiatives:

- Agency 43B, C, and D budget forms, to the extent they were available, contained specific information, including funding information, on numerous agency initiatives.

- Agency long-range IRM plans, though focusing primarily on overall agency goals and trends, also contain additional information on a limited number of specific programs.

- Agency Procurement Requests (APRs) and GSA Delegations of Procurement Authority (DPAs) also contain some useful information.

- INPUT's Procurement Analysis Report (PAR) data base provided the best, most comprehensive source of procurement information.

- INPUT also used survey information from recent Market Analysis Report (MAR) surveys on equipment topics.
- Journal articles, primarily from *Government Computer News, Federal Computer Week* and *Computer Systems News,* also provided much useful information on agency equipment plans.

To further identify procurement trends and sales opportunities on a case-by-case basis, INPUT used the work of two subcontractors in the performance of the project.

- Ziff-Davis PINPOINT provided sales information on actual equipment procurements over the past two fiscal years. Sales data was broken out according to:
  - Fiscal year
  - Applicable Federal Supply Code (FSC)
  - Pure (containing the selected code only) vs. bundled contracts (those containing other product or service codes)
  - Type of procurement, including GSA schedule, formal solicitation, non-competitive, or other
  - The actual number of procurement actions supporting the dollar amount

This data was very useful in identifying the leading vendors, on an agency-by-agency basis, and also how each agency procures most of its equipment.

INPUT also obtained inventory information from Computer Intelligence (CI). Initially, AT&T provided INPUT with a list of 47 vendors for whom equipment installations should be identified. Using this list, CI identified installation counts, on an agency-by-agency basis. This provided a useful contrast to the PINPOINT sales data, to indicate whether equipment manufacturers were also providing this equipment. In some cases, agencies acquired the bulk of their equipment from systems integrators and value-added resellers.

Using all the available data, INPUT filled out the Agency Summary Form (Attachment 4). This form summarized the collected information and provided some insights into how to proceed. To some extent, INPUT also provided some suggestions on what steps, if any, AT&T should take in selling equipment to the agency.

INPUT developed agency summary forms for each department and independent agency. Additionally, INPUT developed forms for those agencies which, while part of a larger department, are also relatively large. These include such well-known agencies as the Social Security Administration and the Internal Revenue Service.

III

Findings

III

Findings

Despite widely reported budget constraints, INPUT found heavy procurement activity among the agencies, including the defense agencies. While INPUT did not identify as many projects as were initially thought to exist, there were still hundreds of initiatives identified. This suggests, despite reports to the contrary, a continuing demand on the part of many agencies to modernize their computer systems and upgrade their capabilities. In particular, INPUT found a much larger opportunity for selling midsize systems than had been expected. This opportunity arose from the two distinct developments:

- The identification of numerous midsize initiatives which the agencies have announced
- The acquisition of large numbers of midsize computers, especially Digital Equipment Corporation (DEC) VAX models, in agency inventories

When INPUT presented the results of the study at AT&T's Washington office, it also provided some overview exhibits. While not part of this study, which stressed agency specifics, these global exhibits served to clarify the overall picture.

- Exhibit III-1 shows the overall federal information technology market, between FY 1989 and FY 1994.
- Exhibit III-2 shows the federal hardware market, divided into large-scale, midsize, and microcomputers.

EXHIBIT III-1

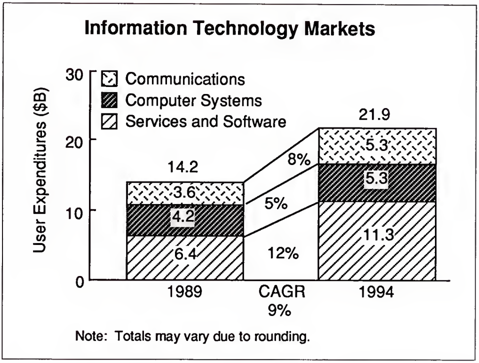
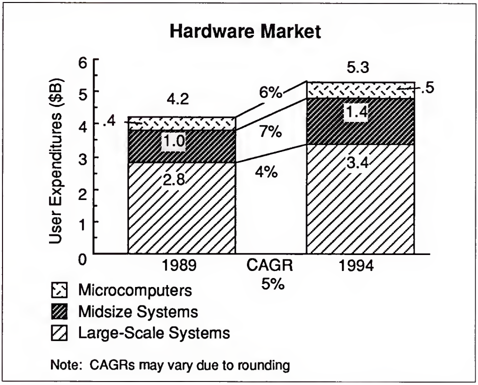


EXHIBIT III-2

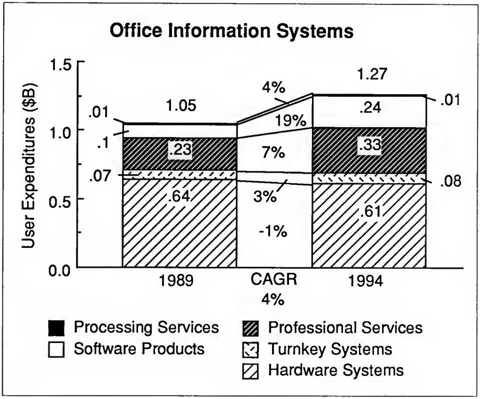


- Exhibit III-3 presents the federal office information systems market, divided into:

  - Processing services
  - Software products

- Professional services
- Turnkey systems
- Hardware systems

EXHIBIT III-3



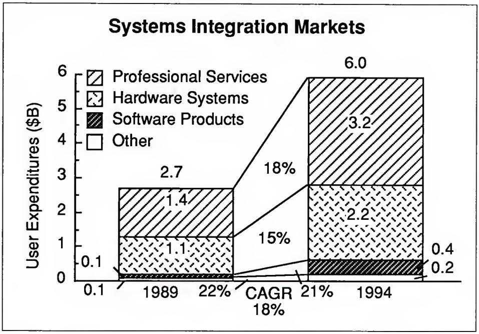
- Exhibit III-4 shows the federal systems integration market, divided into:

  - Professional services
  - Hardware systems
  - Software products
  - Other

Together, these exhibits provide a global framework for consideration of individual agency results.

The size and viability of the federal midsize market represented the most dramatic and surprising result of the study. INPUT found that practically all large agencies had both large inventories of midsize systems and numerous (sometimes dozens of) initiatives to acquire more. Given the procurement procedure problems that most agencies are facing, AT&T can and should apply its SMSCRC contract to them. Even if AT&T's contract meets only 90% of an agency's needs, the ease of acquisition should tip the balance in AT&T's favor.

EXHIBIT III-4



The key criterion for applying SMSCRC will be the required software environment. To the extent that AT&T can enhance its software offerings, its market penetration will likely increase.

INPUT also found, not surprisingly, that most large procurements contain multiple tier requirements. This means that the same procurement will involve mainframes, midsize, and microcomputers. Even some supercomputer procurements often involve midsize systems functioning as servers, front-ends, or auxiliary processors. AT&T's participation as a subcontractor in the Army's CEAP-1A is a typical example. Further, the government is soliciting a handful of requirements contracts, such as SMSCRC. These indefinite quantity, indefinite delivery contracts enable the agencies to buy equipment easily, with a minimum of effort, and usually at a very low price. INPUT does not believe that these projects are profitable for the winning vendors, since heavy discounting is required to win. However, they are appealing to vendors for at least three reasons:

- Many agencies are penetrated, giving the vendor some insights into upcoming requirements
- Profits often develop from ancillary products and services, which are outside the scope of the basic requirements contract
- Requirements contracts enable the vendor to ramp up production capacity and achieve economies of scale which would otherwise be unavailable

1. Matrix Review: Microcomputers

In the Findings section of the briefing, INPUT presented some specific information for several product categories. In the personal computer category, INPUT found limited funding commitments. Most requirements contracts are not funded; they are merely vehicles for acquiring equipment. However, with proper marketing and favorable externals, these contracts will still generate considerable revenue. Exhibits III-5 through III-10, taken from INPUT's *Federal Microcomputer Market Report*, provide some global information:

- Exhibit III-5 summarizes microcomputer acquisition by most large federal agencies in GFY 1987.
- Exhibit III-6 shows a percentage breakout of microcomputers among defense agencies.
- Exhibit III-7 shows a percentage breakout of microcomputers among civilian agencies.
- Exhibit III-8 provides inventory information for the top ten microcomputer vendors and suppliers.
- Exhibit III-9 contains GSA Schedule 70C sales information for GFY 1986-1988.
- Exhibit III-10 identifies survey results on microcomputer applications.

These exhibits, although developed outside of this custom study, serve to amplify the agency-by-agency information collected in this study.

EXHIBIT III-5

Acquisitions of Microcomputers by Federal Agencies—FY 1987

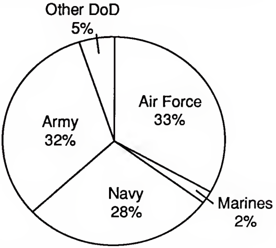
Federal Agency	Number of Microcomputers Acquired (Thousands)	Expenditures for Microcomputers ($ Millions)	Average Dollars Per Unit (Thousands)
Defense Agencies			
Army	58	140	2.4
Air Force	39	68	1.7
Navy	38	124	3.3
Marine Corps	4	13	3.3
DoD Other	9	18	2.0
Civilian Agencies			
Treasury	6	17	2.8
NASA	5	18	3.6
Agriculture	5	62	12.4
Interior	5	15	3.0
EPA	4	11	2.8
Energy	3	12	4.0
HHS	2	9	4.5
Transportation	2	8	4.0
Justice	2	4	2.0
GSA	1	16	16.0
Veterans	1	5	5.0
Total Government (77 agencies reporting)	198.8	614.1	3.1

Source: Exhibit compiled from data included in the *Microcomputer Survey Report*, IRMS, GSA, September, 1988.

EXHIBIT III-6

Microcomputers Installed at Defense Agencies

Percentage of Inventory for Microcomputers

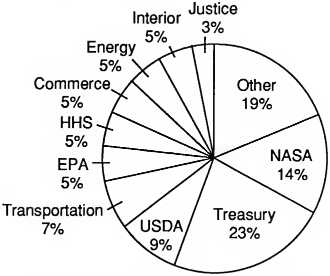


Total Defense Agencies = 334,494 microcomputers
Source: *GSA Microcomputer Survey Report,* September, 1988

EXHIBIT III-7

Microcomputers Installed at Civilian Agencies

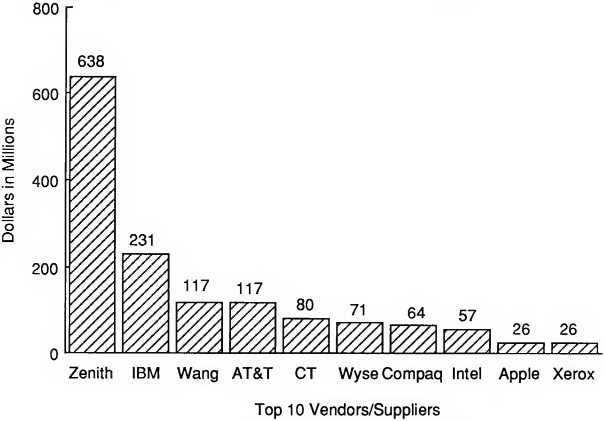
Percentage of Inventory for Microcomputers



Total Civilian Agencies = 155,867 microcomputers
Source: *GSA Microcomputer Survey Report,* September, 1988

EXHIBIT III-8

Total Inventory Expenditures for Federal Microcomputers by Leading Vendors



Total inventory expenditure reported = $1.8 billion

Source: *Microcomputer Survey Report*, Information Resources Management Service, U.S. General Services Administration, September, 1988.

EXHIBIT III-9

GSA Schedule 70C Sales and Top Suppliers
1986-1988
($ Thousands)

Year	Hardware Purchase	Hardware Maintenance	Software Packages and Maintenance	Total	Top Suppliers
1988	223,217	4,110	45,567	272,894	IBM, GTSI, Compaq, HP, Wang, Falcon
1987	191,842	4,615	36,646	233,103	IBM, HP, GTSI, Compaq, Wang
1986	137,784	3,439	14,700	155,923	IBM, HP, GTSI, Compaq, Wang

EXHIBIT III-10

Federal Agency Respondents' View of Microcomputer Applications

Application	Respondents (Percent)
Word processing	100
Electronic mail	96
Project management	85
Administration	81
Accounting	77
Graphics	73
Information analysis	63
Electronic publishing	63
Management systems	54
Artificial intelligence	35
Logistics & distribution	27
Scientific & engineering	27
Human resources/payroll	23
Other	19

2. Matrix Review: Midsize Systems

As already pointed out, most of the opportunities that INPUT uncovered involved midsize systems, either alone or combined with other types of equipment. The inventory is heavily oriented towards VAX computers from Digital Equipment Corporation, reflecting Digital's dominance of the federal market. Typical applications include:

- Office automation
- Transaction support
- Decision support
- Mission activities
- CALS/EDI

It is becoming increasingly difficult to distinguish between the various sizing categories. For example, Digital has recently introduced a new processor which, by most estimates, would be considered a mainframe. On the other hand, Amdahl has announced a new UNIX processor which, in single processing mode, is rated at only 22 MIPS. This might be considered a midsize system. Much depends on how the equipment is configured and which applications it runs.

Exhibits III-11 to III-16 provide global data on the federal midsize market. As with the microcomputer segment, these global exhibits provide an overall framework to assist in reviewing the agency-specific data.

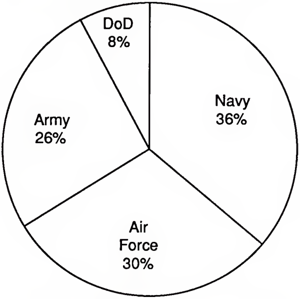
- Exhibit III-11 shows the percentage split among defense agencies of midsize systems installed, by number of systems.
- Exhibit III-12 shows a comparable split by purchase value.
- Exhibits III-13 and III-14 display comparable data for the civilian agencies.
- Exhibit III-15 provides market penetration data by vendor, based on purchase value.
- Exhibit III-16 provides comparable penetration data, based on number of systems.

Again, though this data was not developed as part of this custom study, it does provide some useful information.

EXHIBIT III-11

Midsize Systems Installed—Defense Agencies

Percentage by Number of Systems

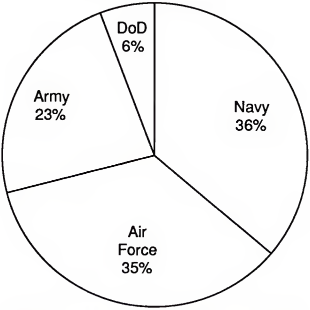


Source: Computer Intelligence, September 1988

EXHIBIT III-12

Midsize Systems Installed—Defense Agencies

Percentage by Purchase Value of Systems

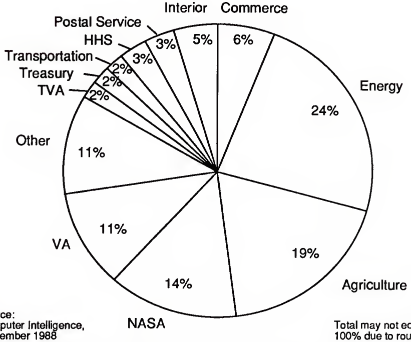


Source: Computer Intelligence, September 1988

EXHIBIT III-13

Midsize Systems Installed—Civilian Agencies

Percentage by Number of Systems



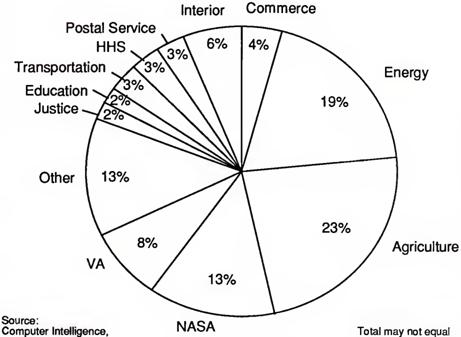
Source:
Computer Intelligence,
September 1988

Total may not equal
100% due to rounding

EXHIBIT III-14

Midsize Systems Installed—Civilian Agencies

Percentage by Purchase Value of Systems



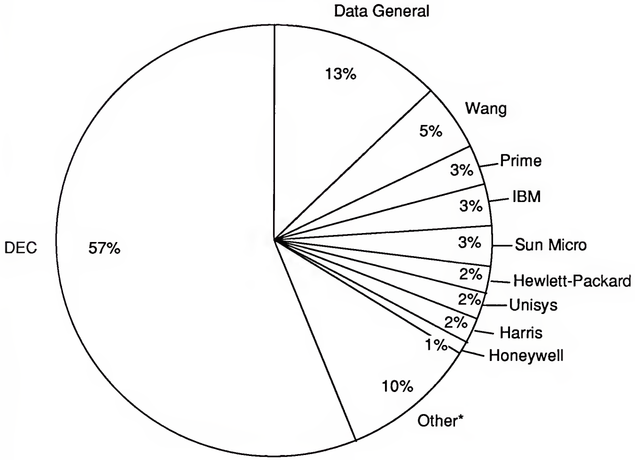
Source:
Computer Intelligence,
September 1988

Total may not equal
100% due to rounding

EXHIBIT III-15

Vendor Share of Installed Midsize Systems

Percentage by Purchase Value of Systems



Source: Computer Intelligence, September 1988

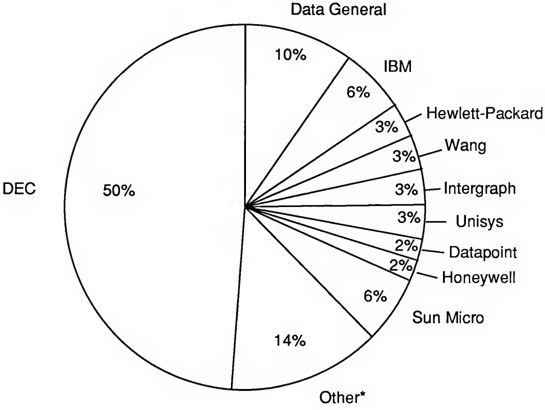
*See Appendix G for a list of vendors in this category.

Total may not equal 100% due to rounding

EXHIBIT III-16

Vendor Share of Installed Midsize Systems

Percentage by Number of Systems



Source: Computer Intelligence, September1988

*See Appendix G for a list of vendors in this category.

Total may not equal 100% due to rounding

3. Matrix Review: Peripherals

INPUT found limited data on federal buys of peripheral equipment. While most hardware procurements involve peripherals, relatively few are limited only to peripherals. Of these, most procurements involved either high-speed printers or DASD, and in many cases both. Based on inventory data, the primary vendors in this area appear to be Hewlett-Packard, Xerox, and Honeywell. This does not appear to be a market segment worth pursuing, given AT&T's current product line.

4. Matrix Review: Local-Area Networks (LANs)

INPUT found many initiatives in the agencies which related to LANs. Most related to office automation or headquarters initiatives, and many also involved Wide-Area Networks (WANs). As agencies increase their interoperability requirements, LANs will become considerably more important in their information systems structures and strategies. As a result, many LANs are being important in connection with larger systems integration projects.

In a 1988 report on the Federal Telecommunications Market, INPUT developed a list of major LAN initiatives. These are provided in Exhibit III-17. As with earlier exhibits, this one was not developed specifically for this report. However, it does contain useful and pertinent information.

EXHIBIT III-17a

Local-Area Networks for Major Agencies

Defense Agency	Network	Funding ($ Thousands)	Fiscal Years
Air Force	Local-Area Network, Headquarters AFLC	108,954	1988-1992
Air Force	Local On-line Network Systems (LONS)	18,340	1988-1992
Air Force	Initial Distributive Network for MACs Information Processing System	123,125	1988-1992
Air Force	MAC Information Systems Internetting	25,567	1988-1992
Air Force	Medical Material Management System On-line (MMMS-OL)	5,809	1988-1992
Air Force	Micro Computers for Cadet Dormitories and Local-Area Network (MID-LAN)	8,653	1988-1992
Army	Inspector General Network—Hardware	4,895	1988-1991
Navy	Pacific Missile Test Center—Local-Area Network (LAN)	22,155	1988-1992
Navy	Naval Aviation Depots—Local-Area Network	5,560	1988-1992
Navy	U.S. Naval Academy Data Network	5,712	1988-1992
Defense Communications Agency	Local-Area Networks and Interfaces for WIS Requirements	4,649	1989-1990
OSD	Policy Secure O/A LAN	64,204	1988-1992
OSD	OSD Secure LAN	11,620	1988-1992

Continued

EXHIBIT III-17b

Local-Area Networks for Major Agencies

Civilian Agency	Network	Funding ($ Thousands)	Fiscal Years
Agriculture	Network for Headquarters and Field, Agricultural Research Service	1,500	1988-1989
Agriculture	Information and Management Network; Cooperative State Research Service	400	1988-1993
Agriculture	Distributed Processing Hardware; U.S. Forest Service	63	1988-1993
Agriculture	Automated Office Operations in National Agriculture Statistics Service Office	475	1988-1993
Agriculture	Local-Area Network for USDA Headquarters	426	1988-1993
Agriculture	Local-Area Network for USDA Headquarters, Working Capital Fund	3,890	1988-1993
Agriculture	Data Communications Network; Soil Conservation Service	1,086	1988-1993
Energy	Integrated Communications Network, Oak Ridge Complex	21,277	1988-1991
Energy	Communications Network, Sandia National Laboratory	5,375	1988-1993
Energy	Local-Area Network; Mound Facility	2,506	1988-1993
Energy	Secure Communications Network, Bettis Atomic Power Laboratory	3,677	1988-1993

Continued

EXHIBIT III-17c

Local-Area Networks for Major Agencies

Civilian Agency	Network	Funding ($ Thousands)	Fiscal Years
HHS, Public Health Service	Ethernet Local-Area Networks	1,517	1988-1989
HHS, National Cancer Institute	Support for NCI Local-Area Networks	1,873	1988-1993
HHS, Social Security Administration	Field Offices Local-Area Network (LAN)	9,801	1988-1993
Interior, Bureau of Indian Affairs	ODS Local-Area Network and Telecommunications Network Management	2,300	1988-1993
Justice, Civil Division	Civil Division LANs	11,155	1988-1993
Justice, Office of Justice Programs	Office Automation Local-Area Network	1,713	1988-1993
Labor, Employment, and Training Administration	Implementation of New Office Automation Technology	4,224	1988-1991
Treasury	Secret Service Integrated Network	40,322	1988-1993
Treasury	Integrated Telecommunications Network	359,171	1988-1993
Transportation	Acquisition of LAN for Headquarters DoT	2,000	1989 only

5. Matrix Review: Synchronous/Asynchronous Equipment

AT&T has developed a new product line intended to replace IBM's 327X equipment, providing more functionality and flexibility. As part of this study, AT&T asked INPUT to place special emphasis on those initiatives which included this equipment. However, INPUT identified only 28 such initiatives. These were copied and provided to AT&T in a separate folder. In each case, the synchronous equipment purchase formed part of a larger procurement.

The CI inventory provides a useful source of additional data on synchronous equipment opportunities. In some cases, the inventory showed several hundred IBM 327X or equivalent units within a single agency or department. In these cases, AT&T sales personnel should approach the agencies and investigate the feasibility of replacing the IBM equipment.

The following information represents some additional findings that came out of the analysis effort:

- The largest federal agencies, for the most part, also engaged in the largest and most numerous activities. In addition, some other agencies were also found to be fairly active, including:
  - The Tennessee Valley Authority
  - The Department of Veterans Affairs
  - The Department of Energy
  - The Defense Logistics Agency
- Most small independent agencies, and also a few large ones (such as the General Services Administration and the Department of Housing and Urban Development) offered few if any viable opportunities.
- Most large agencies, with the exception of the Air Force, made heavy purchases through GSA Schedules. Some smaller ones were also active in this area, including the State Department and the Smithsonian Institution.
- Many large agencies purchased heavily through the Small Business Administration 8(a) set aside program. There were some exceptions, including the Navy and (somewhat surprisingly) Health and Human Services. The Securities and Exchange Commission also acquired much equipment through the 8(a) program.
- Most large agencies also purchased equipment through other small business set aside (SBSA) programs. However, the overall volume was somewhat smaller than that in the 8(a) program. The Tennessee Valley Authority was especially active with SBSA vendors.

- A list of the leading 8(a) vendors, along with their sales and numbers of contracts for ADP equipment, is provided in Exhibit III-18.

EXHIBIT III-18

Leading 8(a) Vendors
ADPE System Configuration and CPUs

	Number Contracts	Dollar Value ($ Millions)
Systems Management America Corporation	7	18.1
Yipkon Corporation	12	10.6
Accurate Information Systems	23	7.5
Texcom	1	5.3
Automated Data Management, Inc.	17	5.1

- Exhibit III-19 presents a comparable list for SBSA vendors.

EXHIBIT III-19

Leading SBSA Vendors
ADPE System Configuration and CPUs

	Number Contracts	Dollar Value ($ Millions)
Janus Systems	5	5.2
Standard Telecommunications	5	4.7
PCA Microsystems	11	2.1
Besserman Corporation	5	1.3
C3, Inc.	5	1.1

- INPUT also investigated sales of I/O and storage devices, and mini and micro control devices, as defined in the federal supply codes. With two exceptions, the volume of SBSA and 8(a) business was negligible. The two exceptions were Miltope Corporation, which realized more than $15 million in SBSA business and Technology Applications, Inc., which obtained $8.4 million in 8(a) business.

IV

Agency Sample

IV

Agency Sample

For the purposes of this study, there is probably no such thing as a typical federal agency. However, when preparing the briefing for AT&T, it was decided that an example would help to clarify some of the reported findings. The Department of Energy was chosen to serve as the example.

Energy has a GFY 1990 hardware budget of $450 million. INPUT identified 35 separate procurement initiatives, with identifiable funding of $67 million over two years and nearly $300 million over five years. Actually funding will likely be much higher, since some initiative descriptions did not contain any funding information.

In terms of overall hardware sales, the leading vendors at Energy are:

- Amdahl
- Data General
- Digital Equipment Corporation
- Hewlett-Packard
- IBM
- Xerox

The inventory information was heavily weighted toward midsize systems, with VAX units dominating this category. In addition, CI identified more than 50,000 microcomputers, and more than 300 synchronous IBM units. This latter count suggests that AT&T sales personnel should approach Energy and investigate the feasibility of replacing the synchronous equipment with its own offerings.

Energy apparently makes little use of either systems integrators or value-added resellers (VARs). A comparison of the sales data (from PIN-POINT) and the inventory data (from CI) suggests that Energy buys most of its hardware from hardware vendors. In FY 1987 and 1988, Energy purchased $8.7 million through GSA Schedules. The following vendors received the bulk of the schedule business:

- Data General
- Digital Equipment Corporation
- Hewlett-Packard
- IBM
- Xerox

Most of the schedule purchases appeared to cover midsize systems and printers.

Energy's 8(a) business is quite small, totaling less than one million dollars for GFY 1987 and 1988 combined. Therefore, this market channel is probably not worth pursuing. No SBSA business was identified.

In collecting the sales data (from PINPOINT) and developing the agency form, it was decided to divide the sales into three categories, in accordance with appropriate Federal Supply Codes (FSCs). The first category, ADPE system configuration and CPUs, includes two FSCs:

- Code 7010, ADPE system configuration, includes the standard CPUs, peripherals, and software.

- Code 7021, ADP Central Processing Unit, includes only CPUs that accept information through digital impulses (as opposed to analog). This is somewhat redundant to the previous code.

The next category covers FSC 7025, ADP I/O and Storage Devices. This class includes devices used to control and transfer information to and from a CPU. This class also includes various terminals, modems, and multiplexors.

The final category includes FSC 7042, Mini and Micro Computer Control Devices. This class includes those computers used as control mechanisms where computer technology is essential to the control or measuring process.

As part of the agency summaries, INPUT computed the actual spending for each of these three categories, for GFY 1987 and 1988 combined. The results for the Energy Department were as follows:

- ADPE Systems: $5.0 million
- I/O and Storage: $6.9 million
- Mini and Micro Control: $16.8 million

The (relatively) large number for the third category reflects the large laboratory environment at many Energy Department facilities.

Unlike some agencies, there does not appear to be any particular bias at Energy, either for equipment or vendors. Digital dominates the midsize inventory, but this is true almost everywhere, reflecting Digital's overall success in this market.

Administrative applications dominated the projects to be procured over the next few years. These include financial, human resources, and facilities systems. The collected initiatives cover relatively few of Energy's mission needs. This reflects Energy's frequent practice of using supercomputers to support its mission. INPUT did not collect these initiatives since they were considered beyond the scope of AT&T's requirements.

V

What Does It Mean?

V

What Does It Mean?

Having collected more than four feet of data on past buying trends and future buying plan, the obvious question arises: How does this relate to AT&T's posture in selling computer equipment to the federal government? INPUT divided the answer into five parts:

1. Market Segments

As already pointed out, INPUT identified a much larger number of midsize opportunities than had been expected. These represent a critical area of focus for AT&T, particularly as it applies to SMSCRC. There is also a handful of requirements contracts, which AT&T has bid or is considering bidding. As pointed out above, it may not be possible to make a profit on these, since competition is so intense. However, AT&T may choose to buy into these contracts, in order to enhance penetration and credibility in the federal marketplace.

There are few major initiatives relating to synchronous/asynchronous equipment. Rather, AT&T should approach this market through the inventory route. By locating large concentrations of IBM 327X equipment, sales personnel may be able to convince agency executives of the advantages of equipment replacement.

INPUT found virtually no market for fault-tolerant equipment in the federal market. Where that market does exist, such as DLA's DARP initiatives, Treasury funds transfer activities, and HHS' Public Health requirements, such well-known firms as Tandem and Stratus are already dominating. Even Digital is bidding some fault-tolerant jobs such as DLA, believing that redundant processors will meet the specification requirements. For the federal market, at least, this is not a segment worth pursuing.

Finally, many projects involve multi-tier acquisitions. AT&T must increase its teaming relationships to participate in these projects, as it did on the recent Army Corps of Engineers award.

2. Competitive Environment

Despite the relatively constrained budget environment, there appears to be an increasing number of participants in federal equipment sales. This development stems from several factors:

- Despite some apparent Walsh-Healey complications, many more contracts are being bid and won by systems integration vendors. This increases the universe of hardware providers, as opposed to hardware manufacturers.
- More 8(a) firms are graduating successfully from the 8(a) program. Many of these are active in supplying computer equipment to the government.
- Many aerospace firms, including Grumman, Lockheed, and General Dynamics, are now entering the federal SI market.

As a result of these and other factors, the market has become overcrowded and will be difficult, if not impossible, to dominate.

The increase in SI projects has increased the need for enhanced teaming relationships. In many cases, these must be nonexclusive arrangements, as the same equipment or software company will serve as a subcontractor for two or more competing primes.

Finally, there is a growing evidence of buy-ins, or at least deep discounting. Control Data's win on CEAP-1A, in which AT&T served as a sub, is widely viewed as a buy-in. Some of the microcomputer contracts which Sysorex has won involved deep discounts. However, the most egregious example, probably of all time, involves the Air Force Strategic War Planning System. General Dynamics, in winning this bid, underbid its nearest competitor by more than $400 million. This defies logic and precedent. Unless General Dynamics knows something that no one else does, this "win" represents a colossal mistake.

3. Discernible Trends

To some extent, federal budget constraints have been overanticipated by the vendor community. While it is true that many large, important programs have been cut, many others are still thriving. On an agency-by-agency basis, INPUT found hundreds of initiatives which are worth investigating.

The Procurement Integrity Act has aggravated the problems in the relationships between vendors and government personnel. Somewhat surprisingly, the Ethics in Government Act, which was actually the Congressional pay raise, suspended the Integrity Act for one year. INPUT believes that this suspension grew out of the post employment restrictions of the Act, rather than the procurement issues. INPUT expects procurement restrictions to increase next year, rather than decrease.

Software certification and standardization has become far more common throughout the government. OMB, in particular, has emphasized the need for standard administration applications throughout the government. A common example is the Joint Financial Management Improvement Program (JFMIP), which is promoting the standardization of financial software. This should be a concern to AT&T. To date, all JFMIP-certified software operates only on GSA platforms. Proposals currently pending at GSA will add Unisys and Digital platforms. If AT&T does not act, it runs the risk of being shut out of the federal financial systems market.

GSA has also promulgated some regulations on disabled access. However, INPUT does not expect this to become a major factor unless the new civil rights bill, covering disabled persons, becomes law. Most businesses are opposing the bill because of the cost and administrative implications, as well as the potential for customer lawsuits.

Finally, in the performance of this study as well as other projects, INPUT has encountered mixed signals on UNIX. It is widely viewed as facilitating the interoperability of agency systems, while limiting the power and flexibility of the applications software. For those requirements involving heavy software sharing, UNIX seems ideal. However, many agency executives still need to be convinced.

4. Effect on SMSCRC

AT&T has an excellent opportunity to penetrate the federal market through SMSCRC. The heavy midsize inventory and high number of midsize procurement plans seems tailor-made for SMSCRC. As agencies continue to experience procurement difficulties, SMSCRC offers an easy way out. Even if it does not fully meet their needs, it may still be suitable.

There is a public perception that AT&T has mishandled its sales efforts on SMSCRC. Whether this is true or not, the perception itself represents a problem. AT&T needs to improve its marketing efforts, as opposed to its selling efforts, to remove this perception. At the least it must establish itself as a viable supplier of midrange boxes to the federal government.

5. Applications Environment

Most of the initiatives that INPUT identified concerned agency administrative requirements. Items such as personnel, procurement, and financial systems comprise the largest number of opportunities.

The second application area, mission systems, are often the hardest to bid. These systems relate specifically to the mission of the agency and include, for example:

- A tax audit system at IRS
- A depot goods tracking system at DLA
- A trajectory tracking system at NASA

These systems often require both specialized software and agency knowledge to bid. They practically mandate teaming, since no single firm, not even IBM, has all the required products and services.

The third category of applications covers office systems. As might be expected, there are many agency initiatives in this area. In most cases, strong LAN support is critical, since data sharing is almost always required. Office systems, along with other end-user computing initiatives, usually require increased planning and security software, since so many personnel interact directly with the system.

VI

Conclusions

VI

Conclusions

As already pointed out, the federal market for midrange computer systems turned out to be much larger than expected. This is obviously where AT&T should focus its efforts. The schedule business is difficult to market or sell, and should receive considerably less emphasis from AT&T.

INPUT found a very inconsistent market for system integrators and value-added resellers (VARs). For example, some agencies actively use system integrators:

- EDS and CSC are very active at NASA.
- CSC sold $64 million in computer systems to the Customs Service.
- The Justice Department used SAIC and EDS for most of its equipment buys.
- CSC, Federal Data, and SAIC all had more than $50 million in sales to the Navy.

On the other hand, Interior, Labor, HHS, VA, and Commerce used practically no integrators. Commerce, VA, and Agriculture made heavy use of VARs, but many other agencies did not. While AT&T needs to strengthen its teaming relationships, there is no consistent approach which will work across the government.

In general, the 8(a) and SBSA business appears to be too small to pursue, at least in a global sense. Again, for certain projects, a specific teaming relationship might be appropriate. But AT&T should not focus heavy resources in this area.

To maximize SMSCRC, AT&T should:

- Use the inventory data to locate those agencies where a swapout makes sense
- Use the initiative data to locate specific opportunities, and then advise agencies on the advantages of SMSCRC
- Increase the availability of software products under SMSCRC, in order to capture more business

Most of all, AT&T should leverage staff shortages and procurement difficulties at the agencies. The most important characteristic of SMSCRC is its ease of use.

Agencies do not need to prepare sole-source justifications or obtain delegations of procurement authority. They need only issue a purchase order. If AT&T can get this word out effectively, sales should increase dramatically.

To capture a greater market share, beyond what SMSCRC can provide, AT&T should:

- Insure that JFMIP certified software is installed on the 3B2 platform
- Strengthen its ties with software providers to increase compatible offerings
- Lobby the advantages of a UNIX environment to agency executives, since most probably do not yet appreciate it
- Establish a continuing presence at those agencies which offer the highest potential of UNIX sales

Finally, in terms of Phase II of this study, INPUT recommends a focus on the federal midsize market, with a view toward leveraging SMSCRC and adding more specificity to agency software requirements.

Attachments

Attachments

ATTACHMENT 1a

Matrix of Information by Agency

Product Category	Planned Expenditures		Inventory	Current Major Contracts (Mandatory/ Non-Mandatory)	Add-on Versus New Purchases
	2-Yr View	5-Yr View			
Personal Computers					
Workstations					
Minicomputers					
Superminis					
Peripherals					
LANs					
Synchronous and Asynchronous					
• Each category above will include software services and support					

ATTACHMENT 1b

Matrix of Information by Agency (con't)

Product Category	Procurements—Historical/Planned									Competitive Situation	UNIX Standardization/ Requirements
	Project Type	Name	Scope	Qty.	$	Time-frame	Appli-cation	Box vs. Sys. Int./Support	Buying Criteria		
Personal Computers	IDIQ Primary RFP Other RFP schedules SBA SA										
Workstations	Same as above										
Minicomputers	Same as above										
Superminis	Same as above										
Peripherals	Same as above										
LANs	Same as above										
Synchronous and Asynchronous	Same as above										
* Each category above will include software services and support										- Biases - Embedded Base Preferences	- Security Requirements

ATTACHMENT 2

Unit Form

Unit Form Number	1. Personal Computers - Software - S and S	2. Workstation - Software - S and S	3. Minicomputers - Software - S and S	4. Superminis - Software - S and S	5. Peripherals - Software - S and S	6. LANs - Software - S and S	7. Synchronous and Asynchronous	8. Fault Tolerant - Software - S and S	9. Others
Planned Expenditures									
Inventory									
Current Major Contracts									
Add-ons vs. New Purchases									
Name									
Scope									
Quantity									
Dollar Value									
Timeframe									
Application(s)									
Solution Type									
Buying Criteria									
Competitive Situation									
UNIX Requirements									
Other									
Comments									

ATTACHMENT 3

Agency

Unit Number	Expenditures		Procurement			Comments
	2-Year	5-Year	New	Add-on	Rec	

ATTACHMENT 4

Agency Summary Form

Agency:

1. FY 1990:
   - Total contracted budget (capital investments, rental, and commercial services)
   - Total hardware budget (purchase of hardware and lease of equipment)
2. Program Business Opportunities:
   - Number of identifiable programs
     - Under $5 million
     - From $5 to $25 million
     - Over $25 million
     - Size unknown
     - Total identifiable programs
     - Identifiable program dollars
       - 2 years
       - 5 years
     - Leading program vendors
     - Significance
3. Inventory Characteristics
4. Use of VARs and Integrators
5. FY 1987 and 1988 GSA Schedule Business:
   - Size
   - Leading vendors
   - Significance
6. FY 1987 and 1988 8(a) Business:
   - Size
   - Leading vendors
   - Significance

ATTACHMENT 4 (con't)

7. FY 1987 and 1988 SBSA Business:

- Size
- Leading vendors
- Significance

8. Spending by Selected Product Group ($ Thousands):

	1987	1988	Total
• ADPE system configuration & CPUs			
Pure			
Within bundled			
• ADP input/output & storage devices			
Pure			
Within bundled			
• Mini and microcomputer control devices			
Pure			
Within bundled			

9. Agency Biases

10. Leading Applications

11. Comments